Commonwealth of Kentucky

Natural Resources and Environmental Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Title V
AIR QUALITY PERMIT

Issued under 401 KAR 52:020

Permittee Name:	**Dart Polymers, Inc.**
Mailing Address:	**2400 Harbor Road** **Owensboro, Kentucky 42301**
Source Name:	**Same as above.**
Mailing Address:	**Same as above.**
Source Location:	**Same as above.**
Permit Number:	**V-00-003 (Revision 1)**
Log Number:	**50667/51350/55337/55642**
Review Type:	**Title V/Synthetic Minor/Minor/Admin Revision**
Source ID #:	**21-059-00131**
Regional Office:	**Division For Air Quality** **Owensboro Regional Office** **3032 Alvey Park Drive W., Suite 700** **Owensboro, KY 42303-2191**
County:	**Daviess**
Application Complete Date:	**March 27, 2000**
Issuance Date:	**June 4, 2001**
Revision Date:	**December 19, 2003**
Expiration Date:	**June 4, 2006**

John S. Lyons, Director
Division for Air Quality

Revised 12/09/02

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Rev #	Permit type	Log #	Complete Date	Issuance Date	Summary of Action
----	Initial Issuance	50667 / 51350	03/27/00	06/04/01	
1	Minor and Administrative Revision	55337 / 55642	04/28/03	12/19/03	Polystyrene Mass Plant Line #1 from batch to continuous process

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first having submitted a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

01 (--) Batch Process Vents, Plant 1 – Mass Plant (Polystyrene Pellets Production)

Description: Primary Product: Polystyrene Pellets. Control Equipment for VOC: None

The following equipment/operations (1 through 10) are vented to the Antioxidant Tank Vent:
Stack: (M6) Antioxidant Tank Vent

Line 1:

1.	Pre-batch Reactor R-101	(Group 2 process vent)
2.	Pre-poly Reactor R-102	(Group 2 process vent)
3.	U-tube Reactor R-1310	(Group 2 process vent)

Line 2:

4.	Pre-batch Reactor R-201	(Group 2 process vent)
5.	Pre-poly Reactor R-202	(Group 2 process vent)
6.	U-tube Reactor R-2310	(Group 2 process vent)
7.	Rubber Dissolver Process Tank #1 6,000 gal, Constructed 3/9/70	(Group 2 process vent)
8.	Rubber Dissolver Process Tank #2 6,000 gal, Constructed 3/9/70	(Group 2 process vent)
9.	Rubber Dissolver Process Tank #3 6,000 gal, Constructed 3/9/70	(Group 2 process vent)
10.	Antioxidant (Slurry) tank, TK-0710	(Group 2 process vent)

The following equipment/operations (11 & 12) are vented to the Take off Lines Vent:
Stack: (M8) Take Off Lines Vent

11.	Die Heads Line 1
12.	Die Heads Line 2

Note: The Emission Points 11 and 12 are exempt from Subpart JJJ requirements [40 CFR 63.1310(d)(4)].
Note: Upon notification to the Division for Air Quality regarding start-up of Line 1 as a continuous process, items 1-3 and 11 above will no longer be subject to the requirements applicable to this Emission Group. See Emission Group 03.

02 (--) Batch Process Vents, Plant 3 – Suspension Plant (Polystyrene Beads Production)

Description: Primary Product: Polystyrene Beads. Control Equipment for VOC: None

1.	Batch Reactors (R-101&R-102) Stack: Roof Vent (S6)	(Group 2 process vent)
2.	Batch Reactors (R-103&R-104) Stack: Roof Vent (S7)	(Group 2 process vent)

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

01, 02 Batch Process Vents (Continued)

APPLICABLE REGULATIONS:

Regulation 401 KAR 63:002 (40 CFR Part 63) *National Emission Standards for Hazardous Air Pollutants* applies to the Thermoplastic Product Process Unit (TPPU). Specifically, Regulation 40 CFR 63.1310, Subpart JJJ - Group IV Polymers and Resins applies to the TPPU.

1. **Operating Limitations:**

Group 2 Vents:

According to 40 CFR 63.1322(f), Group 2 batch process vents with annual emissions greater than or equal to the level specified in 63.1323(d) [11,800 kg/yr or 26,007 lb/yr] shall comply with 40 CFR 63.1322(f)(1), f(2) or (h).

- 40 CFR 63.1322(f)(1):

i. Establish a *"batch mass input limitation"* that ensures that Group 2 batch vents do not become Group 1 vents.
ii. Over the course of the affected source's "year", as reported in the Notification of Compliance Status in accordance with Sec. 63.1335(e)(5)(iv), the owner or operator shall not charge a mass of HAP or material to the batch unit operation that is greater than the level established as the batch mass input limitation.
iii. The owner or operator shall comply with the recordkeeping requirements in Sec. 63.1326(d)(2), and the reporting requirements in Sec. 63.1327(a)(3), (b), and (c).
iv. The owner or operator shall comply with Sec. 63.1323(i), when process changes are made.

- 40 CFR 63.1322(f)(2): Comply with the requirements of this subpart for Group 1 batch process vents.

- 40 CFR 63.1322(h): Owners or operators of Group 2 batch process vents are not required to establish a batch mass input limitation if the batch process vent is Group 2 at the conditions specified in paragraphs (h)(1) and (h)(2) of this section and if the owner or operator complies with the recordkeeping provisions in Sec. 63.1326(a)(1) through (3), 63.1326(a)(9), and 63.1326(a)(4) through (6) as applicable, and the reporting requirements in Sec. 63.1327(a)(5), (a)(6), and (b).

i. 40 CFR 63.1322(h)(1): Emissions for the single highest-HAP recipe (considering all products that are produced in the batch unit operation) are used in the group determination; and
ii. 40 CFR 63.1322(h)(2): The group determination assumes that the batch unit operation is operating at the maximum design capacity of the TPPU for 12 months.

According to 40 CFR 63.1322(g), Group 2 batch process vents with annual emissions less than the level specified in 63.1323(d) [11,800 kg/yr or 26,007 lb/yr] shall comply with 40 CFR 63.1322(g)(1), (g)(2), (g)(3), or (g)(4).

- 40 CFR 63.1322(g)(1):

i. 40 CFR 63.1322(g)(1)(i): Establish a *"batch mass input limitation"* that ensures that emissions do not exceed the level specified in Sec. 63.1323(d).
ii. 40 CFR 63.1322(g)(1)(ii):Over the course of the affected source's "year", as reported in the

REGULATIONS, AND OPERATING CONDITIONS (Continued)

01, 02 Batch Process Vents (Continued)

Notification of Compliance Status in accordance with Sec. 63.1335(e)(5)(iv), the owner or operator shall not charge a mass of HAP or material to the batch unit operation that is greater than the level established as the batch mass input limitation.

iii. 40 CFR 63.1322(g)(1)(iii):The owner or operator shall comply with the recordkeeping requirements in Sec. 63.1326(d)(1), and the reporting requirements in Sec. 63.1327(a)(2), (b), and (c).

iv. 40 CFR 63.1322(g)(1)(iv):The owner or operator shall comply with Sec. 63.1323(i), when process changes are made.

- 40 CFR 63.1322(g)(2): Comply with the requirements of 40 CFR 63.1322(f)(1). See above.
- 40 CFR 63.1322(g)(3): Comply with the requirements of 40 CFR 63.1322(f)(2). See above.
- 40 CFR 63.1322(g)(4): Comply with the requirements of 40 CFR 63.1322(h). See above.

Compliance Demonstration:

a. The "Batch mass input Limitation" shall be determined according to 40 CFR 63.1325(g).
b. See the Record Keeping and Reporting Requirements below.

2. Emission Limitations:

If complying with 40 CFR 63.1322(g), the emissions from the each Group 2 batch process vent listed above shall not exceed 11,800 kg/yr (26,007 lb/yr). If complying with 40 CFR 63.1322(f), see the operating limitations above.

Compliance Demonstration:

See the compliance demonstration for 1. Operating Limitations above.

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:

Group 2 batch process vents shall comply with either paragraph 40 CFR 63.1326(d)(2) or d(1) based on whether process vent is complying with 43 CFR 63.1322 (f) or 63.1322 (g) respectively.

a. 63.1326(d)(1) - The following records shall be kept up-to-date and readily accessible:
   i. Records designating the established batch mass input limitation required by 63.1322(g)(1) and specified 63.1325(g).
   ii. Records specifying the mass of HAP or material charged to the batch unit operation.
b. 63.1326(d)(2) - The following records shall be kept up-to-date and readily accessible:
   i. Records designating the established batch mass input limitation required by 63.1322(f)(1) and specified in 63.1325(g).
   ii. Records specifying the mass of HAP or material charged to the batch unit operation.
c. See Section D, Source Emission Limitations and Testing Requirements.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

01, 02 Batch Process Vents (Continued)

6. Specific Reporting Requirements:

a. If the process vent is complying with 43 CFR 63.1322 (g), the reporting shall be done according to 40 CFR 63.1327(a)(2), (b), and (c).

i. 40 CFR 63.1327(a)(2) referring to 40 CFR 63.1326(d)(1)(i):
Records designating the established batch cycle limitation required by 40 CFR 63.1322(g)(1) and specified in 40 CFR 63.1325(g).

ii. 40 CFR 63.1327(b):
Whenever a process change, as defined in 40 CFR 63.1323(i)(1), is made that causes a Group 2 batch process vent to become a Group 1 batch process vent, the owner or operator shall notify the Administrator and submit a description of the process change within 180 days after the process change is made or with the next periodic report, whichever is later. The owner or operator of an affected source shall comply with the Group 1 batch process vent provisions in Secs. 63.1321 through 63.1327 in accordance with Sec. 63.1310(i)(2)(ii).

iii. 40 CFR 63.1327 (c):
Whenever a process change, as defined in 40 CFR 63.1323(i)(1), is made that caused a Group 2 batch process vent with annual emissions less than the level specified in 40 CFR 63.1323(d) for which the owner or operator has chosen to comply with Sec. 63.1322(g) to have annual emission greater than or equal to the level specified in Sec. 63.1323(d) but remains a Group 2 batch process vent, or if a process change is made that requires the owner or operator to redetermine the batch mass input limitation as specified in Sec. 63.1323(I)(3), the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. The following information shall be submitted:

1) A description of the process change
2) The batch mass input limitation determined in accordance with 40 CFR 63.1322(f)(1).

b. If the process vent is complying with 43 CFR 63.1322(f), the reporting shall be done according to 40 CFR 63.1327(a)(3), (b), and (c).

i. 40 CFR 63.1327(a)(3) referring to 40 CFR 63.1326(d)(2)(i):
Records designating the established batch mass input limitation required by 40 CFR 63.1322(f)(1) and specified in 40 CFR 63.1325(g).

ii. 40 CFR 63.1327(b): See above in (a).

iii. 40 CFR 63.1327(c): See above in (a).

c. See Section D, Source Emission Limitations and Testing Requirements.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: See Section H, Alternate Operating Scenarios.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

03 (--) Group 2 Continuous Process Vents per 40 CFR 63, Subpart JJJ
Plant 1 – Mass Plant (Polystyrene Pellets Production)

The following equipment/operations are vented to the Vacuum pump vent (M7):
Stack: (M7) Vacuum Pump Vent

1.	Line 1 Pregrafter Reactor (R-1210)	(Continuous Process Vent)
2.	Line 1 Prepoly Reactor (R-1310) (Vents through Prepoly Condenser)	(Continuous Process Vent)
3.	Line 1 Prepoly Condenser (C-1310)	(Continuous Process Vent)
4.	Line 1 Devolatizer 1 (D-1710) (Vents through DV-1 Condenser System)	(Continuous Process Vent)
5.	DV-1 Condenser System (E-1810) (Vents through D-1110)	(Continuous Process Vent)
6.	Line 1 Recycle Tank (D-1110)	(Continuous Process Vent)
7.	Line 1 Devolatizer 2 (D-1720) (Vents through DV-2 Condenser System)	(Continuous Process Vent)
8.	DV-2 Condenser System (E-1820)	(Continuous Process Vent)
9.	Line 3 Pregrafter Reactor (R-3210)	(Continuous Process Vent)
10.	Line 3 Prepoly Reactor (R-3310) (Vents through Prepoly Condenser)	(Continuous Process Vent)
11.	Line 3 Prepoly Condenser (C-3315)	(Continuous Process Vent)
12.	Line 3 Tower 2 Reactor (R-3510)	(Continuous Process Vent)
13.	Line 3 Devolatizer 1 (D-3710) (Vents through DV-1 Condenser)	(Continuous Process Vent)
14.	Line 3 DV-1 Condenser (E-3810) (Vents through D-3110)	(Continuous Process Vent)
15.	Line 3 Recycle Tank	(Continuous Process Vent)
16.	Line 3 Devolatizer 2 (D-3820) (Vents through DV-2 Condenser)	(Continuous Process Vent)
17.	DV-2 Condenser (E-3820)	(Continuous Process Vent)
18.	Line 2 DV Condenser	(Continuous Process Vent)
19.	Line 2 Condensate Tank	(Continuous Process Vent)

The following equipment/operation (point 8) is vented to the Take off Lines Vent:
Stack: (M8) Take Off Lines Vent

20. Die Head Line 3
21. Die Heads 1 and 2 – Line 1

Notes: Points 20 and 21 are exempt from Subpart JJJ requirements [40 CFR 63.1310(d)(4)]. Items 1-8 and 21 above will become part of Emission Group 03 upon notification to the Division for Air Quality of start-up of these points as a continuous process.

The following equipment is part of the continuous process lines and contain HAPs, but do not contribute HAP or VOC emissions:

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

03 (--) Group 2 Continuous Process Vents (Continued)

1. Line 1 Feed Preheaters (E-1010, E-1020)

2. Line 1 Tower Reactor (R-1410)
3. Line 1 DV Preheater (E-1610)
4. Line 3 Feed Preheaters (E-3010, E-3020, E-3030)
5. Line 3 U-Tube Reactor (R-3410)
6. Line 3 DV Preheater (E-3610)

APPLICABLE REGULATIONS:
Regulation 401 KAR 63:002 (40 CFR Part 63) National Emission Standards for Hazardous Air Pollutants applies to the Thermoplastic Product Process Unit (TPPU). Specifically, Regulation 40 CFR 63.1310, Subpart JJJ - Group IV Polymers and Resins applies to the TPPU.

1. Operating Limitations: None

2. Emission Limitations:

a. Pursuant to 40 CFR 63.1316(c), the source producing polystyrene resin using continuous process shall comply with the requirements specified in 40 CFR 63.1316(c)(1) through (c)(3). 40 CFR 63.1316(c)(1): Limit the organic HAP emissions from the continuous process vents in the collection of material recovery section by complying with one of the following: 40 CFR 63.1316(c)(1)(i), (ii) or (iii). Dart Polymers chose to comply with 40 CFR 63.1316(c)(1)(i) which allows no emissions to be greater than 0.0036 kg organic HAP/Mg of product.

b. Pursuant to 40 CFR 60.562-1(b)(1), each owner or operator of a polystyrene process line shall limit the continuous TOC emissions from the material recovery section. The continuous TOC emissions shall not exceed 0.0036 kg TOC/Mg product.

Compliance Demonstration:
To comply with emission limit of 0.0036 kg HAP/Mg of product [2(a) above]:

a. The rate of product produced (kg/hr) shall be recorded.
b. To calculate the emissions in kg/Mg of product the following equation shall be used [40 CFR 63.1318(c) referring to 40 CFR 63.1318(b)(1)(i)]:

$$ER = \sum_{i=1}^{n} \frac{Ei}{(0.001Pp)}$$

Where
ER = Emission rate of total organic HAP or TOC, kg/Mg product
Ei = Emission rate of total organic HAP or TOC in continuous process vent i, kg/hr
Pp = The rate of polymer produced, kg/hr
N= Number of continuous process vents in the collection of material recovery sections at the affected source.
0.001 is the Conversion factor, kg to Mg

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

03 (--) Group 2 Continuous Process Vents (Continued)

c. The mass emission rate for each continuous process vent, Ei, shall be determined according to the procedures specified in 40 CFR 63.1318(b)(1)(i) except 40 CFR 63.1316(a)(1)(i) is not applicable and need not be complied with.
d. The rate of polymer produced, Pp (kg/hr), shall be determined according to procedures specified

in 40 CFR 63.1318(b)(1)(ii).

To comply with emission limit of 0.0036 kg HAP/Mg of product [2(b) above]:

a. See 4.c. Specific Monitoring Requirements below.
b. Dart has performed a source test on November 16, 1996 to show compliance with the emission limit.
c. Perform source testing as outlined in 3. Testing Requirements below, and submit compliance reports as specified in Section G(d)5 of this permit.

3. Testing Requirements:

a. To comply with mass emission rate (kg/hr), the procedures specified in 40 CFR 63.116(c)(4) shall be followed. However, Method 18 or Method 25A, 40 CFR 60, appendix A may be used for the purpose of compliance with Subpart JJJ instead of Method 18, 40 CFR 60, appendix A.
b. The use of Method 25 A, 40 CFR part 60, appendix A shall comply with paragraphs 40 CFR 63.1318(b)(1)(i)(A) and (b)(1)(i)(B).
c. The rate of polymer produced, Pp (kg/hr), shall be determined according to procedures specified in 40 CFR 63.1318(b)(1)(ii).
d. The ER in kg/Mg product shall be calculated using the test results from a.) and c.) above to show compliance with the 0.0036 kg HAP/Mg of product by using equation listed in 2. Emissions Limitations above.

4. Specific Monitoring Requirements:

a. For each of the Group 2 Continuous Process Vents:
40 CFR 63.1317 requires continuous process vents to comply with 40 CFR 63.1315(a), which in turn requires the permittee to comply with 40 CFR 63.113 to 63.118. However, in accordance with the provisions of 40 CFR 63.113 (e), the permittee is not subject to any monitoring requirements of HON rule for Group 2 process vents.
b. The permittee shall monitor the daily average rate of polymer produced, kg/hr. If the average production rate (kg/hr calculated on a daily basis) exceeds the production rate in 3.(c), Testing Requirements above by 10%, then the source shall redo the testing to ensure compliance with the emission rate limitation at the increased production rate. The permittee is reminded that, if process rates are increased above the rates contained in permit application, the permittee is required to apply for and be issued a permit prior to the initiation of the proposed activity.
c. The permittee shall monitor devolatilization section vacuum level, to indicate whether the recovery system/vacuum system is operating as designed and compliance tested. Periods when the vacuum level exceeds 50 torr shall be recorded in a log.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

03 (--) Group 2 Continuous Process Vents (Continued)

5. Specific Recordkeeping Requirements:

a. See 4. Specific Monitoring Requirements above.
b. See Section D, Source Emission Limitations and Testing Requirements.

6. Specific Reporting Requirements:

a. The permittee shall submit Periodic Reports as specified in 40 CFR 63.1335.

b. See Section D, Source Emission Limitations and Testing Requirements.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

04 (--) Storage Vessels, Plant 1 – Mass Plant (Polystyrene Pellets Production)

Description: Control Equipment for HAPS and VOCs: None

1. (M1) Styrene Tank
   Construction Date: 1/1/62, Size: 46,000 gal
2. (M2) Rubber Solution Tank 440 (Group 2 Storage Tank)
   Construction Date: 7/23/84, Size: 51,000 gal
3. (M3) Rubber Solution Tank 450 (Group 2 Storage Tank)
   Construction Date: 7/23/84, Size: 51,000 gal
4. (M4) Rubber Solution Tank 3010 (Group 2 Storage Tank)
   Construction Date: 1/1/94, Size: 30,000 gal
5. (M5) Rubber Solution Tank 3020 (Group 2 Storage Tank)
   Construction Date: 1/1/94 Size: 30,000 gal
6. (M9) Styrene Hill Tank
   Construction Date: 3/30/99 Size: 1,250,000 gal
7. (M9) Styrene Hill Tank
   Construction Date: 3/30/99 Size: 1,250,000 gal

Note: Storage tanks 1, 6 and 7 are exempt from the requirements of Subpart JJJ according to 40 CFR 63.1314(d).

05 (--) Storage Vessels, Plant 3 – Suspension Plant (Polystyrene Beads Production)

1. (S1) Hill Styrene Monomer Tank 310
   Construction Date: 11/17/85, Size: 700,000 gal
2. (S2) Hill Styrene Monomer Tank 320
   Construction Date: 04/17/89, Size: 700,000 gal
3. (S3) Hill Styrene Monomer Tank 330
   Construction Date: 10/28/94, Size: 850,000 gal
4. (S4) Styrene Monomer Day Tank
   Construction Date: 07/18/91, Size: 100,000 gal
5. (S5) Styrene Monomer Batch Tank
   Construction Date: 04/26/89, Size: 14,000 gal

Note: Emission Unit 05, Storage Tanks, Emission Points 1 through 5 are exempt from requirements of 40 CFR 63, Subpart JJJ according to 40 CFR 63.1314(d).

06 (--) Shoreline Tanks

Description: Control Equipment for HAPS and VOC: None

1. (X1) Shoreline Styrene Monomer Day Tank 350
   Construction Date: 07/07/78, Size: 300,000 gal
2. (X2) Shoreline Styrene Monomer Day Tank 360
   Construction Date: 07/07/78, Size: 300,000 gal

Note: Emission Unit 06, Storage Tanks, Emission Points 1 and 2 are exempt from requirements of 40 CFR 63, Subpart JJJ according to 40 CFR 63.1314(d).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

04, 05, 06 Storage Vessels & Shoreline Tanks (Continued)

APPLICABLE REGULATIONS:

401 KAR 63:002 (40 CFR Part 63) *National Emission Standards for Hazardous Air Pollutants* applies to the Thermoplastic Product Process Unit (TPPU). Specifically, Regulation 40 CFR 63.1310, Subpart JJJ - Group IV Polymers and Resins applies to the storage vessels Emission Unit 04,Emission Points 2 through 5. The tank vessels Emission Unit 04,Emission Points 1, 6 and 7 are exempt from the requirements of Subpart JJJ [40 CFR 63.1314(d)].

401 KAR 63:020, *Potentially hazardous matter or toxic substances* applies to the toxic emissions from tank vessels Emission Unit 04,Emission Points 1, 6, 7.

401 KAR 60:005, *Standards of Performance for New Stationary Sources* (40 CFR 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels*) is applicable to vessels Emission Unit 04,Emission Points 4 through 7 and vessels Emission Unit 05,Emission Points 1 through 5 above.

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:**
   a. Group 2 Storage Tanks:
   Pursuant to Regulation 40 CFR 63.123(a), the permittee shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. These records shall be kept as long as the storage vessel retains Group 2 status and is in operation.
   b. Emission Unit 04,Emission Points 4 through 7 and Emission Unit 05,Emission Points 1 through 5 [Requirements of 40 CFR 60, Subpart Kb]
      i. The records showing the dimension of the storage vessel and the analysis showing the capacity of the storage vessel shall be kept readily accessible. [40 CFR 60.116b(b)]
      ii. The records required above shall be kept available for the life of the source. [40 CFR 60.116b(a)]

6. **Specific Reporting Requirements:**
   a. The permittee shall submit Periodic Reports as specified in 40 CFR 63.1335 for all Group 2 storage tanks.
   b. See Section D, Source Emission Limitations and Testing Requirements.

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

REGULATIONS, AND OPERATING CONDITIONS (Continued)

-- (--) Wastewater Streams:

Plant 1 – Mass Plant (Polystyrene Pellets Production) and
Plant 3 – Suspension Plant (Polystyrene Beads Production)

REGULATIONS NOT APPLICABLE:
Regulation 40 CFR 63.1310, Subpart JJJ - Group IV Polymers and Resins does not apply to the wastewater streams. Specifically, the provisions of 40 CFR 63.1330(a), (b) and (c) do not apply to the affected sources producing polystyrene using either a continuous or batch process. [40 CFR 63.1330(e)]

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

07 Equipment Leak Provisions - Pipeline Equipment:
Plant 1 – Mass Plant (Polystyrene Pellets Production)

Description: Process and Storage Pipeline Equipment including Light Liquid Pumps, Gas Valves, Gas Flanges, Gas Open Ended Valves, Gas PSVs, Liquid Valves, Liquid Flanges
Styrene Service- 83
Ethyl benzene Service- 48

08 Equipment Leak Provisions - Pipeline Equipment:
Plant 3 – Suspension Plant (Polystyrene Beads Production)

Description: Process and Storage Pipeline Equipment including Light Liquid Pumps, Gas Valves, Gas Flanges, Gas Open Ended Valves, Gas PSVs, Liquid Valves, Liquid Flanges
Styrene Service- 46

APPLICABLE REGULATIONS:
401 KAR 63:002 (40 CFR Part 63) *National Emission Standards for Hazardous Air Pollutants* applies to the Thermoplastic Product Process Unit (TPPU). Specifically, 40 CFR 63.1310, Subpart JJJ - *Group IV Polymers and Resins* applies to the TPPU.
40 CFR 63.1331, (40 CFR 63 Subpart H) applies to the pipeline equipment listed above with the differences noted in 40 CFR 63.1331(a)(1) through (a)(10).

1. **Operating Limitations:**
   For the pipeline equipment in organic HAP service, the permittee shall maintain a leak detection and repair (LDAR) program containing the following elements:
   a. Each piece of pipeline equipment within Plant 1 (polystyrene pellets) and Plant 3 (polystyrene beads) shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H [40 CFR 63.162 (c)].
   b. When a leak is detected as specified in 40 CFR 63.163 and 63.164; 63.168 and 63.169; and 63:172 through 63.174, the procedures described in 40 CFR 63.162 (f) (1) - (3) shall be followed to identify the leaking piece.
   c. See the Specific standards for each type of pipeline equipment described under **2. Emission Limitations** below.

Compliance Demonstration:
Compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 63.181 and the reports required by 63.182, review of performance test results, and by inspections [40 CFR 63.162 (a)].

2. **Emission Limitations:**
   The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 63.502(b) through (j) or 40 CFR 63 Subpart H, the permittee shall maintain records of the reason(s) why the equipment is exempt.

REGULATIONS, AND OPERATING CONDITIONS (Continued)

07, 08 Equipment Leak Provisions (Continued)

a. Standards: Pumps in light liquid service [40 CFR 63.163]:

40 CFR 63.163 (a)	Implementation and compliance provisions
40 CFR 63.163 (b)	Monitoring requirements, leak detection levels, frequency of monitoring
40 CFR 63.163 (c)	Repair procedures and time frames
40 CFR 63.163 (d)	Calculation procedures to determine percent leaking pumps and requirements for quality improvement programs
40 CFR 63.163 (e)-(j)	Exemptions for specific types of pumps

b. Standards: Pressure relief devices in gas/vapor service [40 CFR 63.165]:

40 CFR 63.165 (a)	Operational requirements
40 CFR 63.165 (b)	Pressure release procedures
40 CFR 63.165 (c)-(d)	Exemptions for specific types of pressure relief devices

c. Standards: Open-ended valves or lines [40 CFR 63.167]:

40 CFR 63.167 (a)-(c)	Operational requirements
40 CFR 63.167 (d)-(e)	Exemptions for specific types of valves

d. Standards: Valves in gas/vapor service and in light liquid service [40 CFR 63.168]:

40 CFR 63.168 (a)	Operational requirements
40 CFR 63.168 (b)-(d)	Monitoring requirements and intervals
40 CFR 63.168 (e)	Calculation procedures to determine percent leaking valves
40 CFR 63.168 (f)	Leak repair time frames
40 CFR 63.168 (g)	First attempt repair procedures
40 CFR 63.168 (h)-(i)	Exemptions for unsafe-to-monitor and difficult-to-monitor valves

e. Standards: Delay of repair [40 CFR 63.171]:

40 CFR 63.171	Allowances for delay of repair

f. Standards: Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]:

40 CFR 63.174 (a)	Operational requirements
40 CFR 63.174 (b)	Monitoring requirements and intervals
40 CFR 63.174 (c)	Procedures for open connectors or connectors with broken seals
40 CFR 63.174 (d)	Leak repair time frames
40 CFR 63.174 (e)	[Reserved]
40 CFR 63.174 (f)-(h)	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174 (i)	Calculation procedures to determine percent leaking connectors
40 CFR 63.174 (j)	Optional credit for removed connectors

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

07, 08 Equipment Leak Provisions (Continued)

g. Quality improvement program for valves [40 CFR 63.175]:
Pursuant to 40 CFR 63.168 (d)(1)(ii), in Phase III, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175 (a)	Quality improvement program alternatives
40 CFR 63.175 (b)	Criteria for ending quality improvement programs
40 CFR 63.175 (c)	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175 (d)	Quality improvement program to demonstrate further progress
40 CFR 63.175 (e)	Quality improvement program of technology review and improvement

h. Quality improvement program for pumps [40 CFR 63.176]:
Pursuant to 40 CFR 63.163 (d)(2), if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps in the Mass Plant or three pumps in the Mass Plant leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176 (a)	Applicability criteria
40 CFR 63.176 (b)	Criteria for ending the quality improvement program
40 CFR 63.176 (c)	Criteria for resumption of the quality improvement program
40 CFR 63.176 (d)	Quality improvement program elements

The same requirements apply to the suspension plant pumps.

Compliance Demonstration:
A copy of the leak detection and repair (LDAR) program meeting the criteria listed above shall be kept available at a readily accessible location for inspection.

3. Testing Requirements:
The permittee shall comply with the following test methods, schedules and procedures requirements [40 CFR 63.180 (a)]:

40 CFR 63.180 (b)	Monitoring procedures, test methods and calibration procedures
40 CFR 63.180 (c)	Leak detection monitoring procedures
40 CFR 63.180 (d)	Procedures for determining organic HAP service applicability

4. Specific Monitoring Requirements:
See 3. Testing Requirements above.

5. Specific Recordkeeping Requirements: [40 CFR 63.181]
a. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.
b. The permittee shall maintain all records pertaining to the pipeline equipment required by 40 CFR 63.181 (b).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

07, 08 Equipment Leak Provisions (Continued)

c. For visual inspections, the permittee shall document that the inspection was conducted and he

date of the inspection. These records shall be kept for a period of two years [40 CFR 63.181 (c)].

d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for two years.

e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for the duration of the quality improvement program.

6. Specific Reporting Requirements:

The permittee shall submit the following reports:

a. 40 CFR 63.1331(a)(4), Notification of Compliance Status - The permittee shall submit the Notification of Compliance Status required by 40 CFR 63.182 (a)(2) and 40 CFR 63.182 (c) of Subpart H within 150 days of applicable compliance date as specified in 63.1311 for the equipment leak provisions (February 28, 1998). The Notification can be submitted as part of the Notification of Compliance Status required by 40 CFR63.1335(e)(5). See Section D, Source Emission Limitations and Testing Requirements for the Notification of Compliance Status requirements.

b. Periodic Reports - See Section D, Source Emission Limitations and Testing Requirements.

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

09 Miscellaneous Process and Non-Process Equipment (Not Subject to Subpart JJJ)
Plant 3 – Suspension Plant (Polystyrene Beads Production)

1. Two (2) Suspension Batch out Tanks TK-102 and TK-103, Stack: Roof Vent
2. 12,500 gallon Hydrochloric Acid Storage Tank TK-6100
   Construction Date: 09/25/98

Description:
Control Equipment for HCl emissions from Emission Unit 1 above: Submerged Fill Pipe
Control Equipment for HCl emissions from Emission Unit 2 above: Packed Column Scrubber

APPLICABLE REGULATIONS:
401 KAR 63:020, *Potentially hazardous matter or toxic substances* applies to the Tanks above.

1. **Operating Limitations:** None

2. **Emission Limitations**: None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:**
   a. The times when the HCl in the Batchout Tanks (Emission Units 1) is not added via a submerged fill pipe shall be recorded.
   b. The scrubber shall be inspected to ensure liquid stream flow at the beginning of each fill event at the HCl storage tank (Emission Unit 2). Records shall be kept of times when there is no flow in the scrubber.

5. **Specific Recordkeeping Requirements:**
   See 4. Specific Monitoring Requirements and 7. Specific Control Eqp. Operating Conditions.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:**
   a. The hydrochloric acid solution shall be added to the tank via submerged fill pipe only for the two (2) Batchout tanks (Emission Units 1 above) to meet the requirements of 401 KAR 63:020.
   b. The HCl Storage Tank (Emission Unit 2) shall always vent through a packed column scrubber to meet the requirements of 401 KAR 63:020. The scrubber shall be operational at all the fill events.
   c. The permittee shall install, calibrate, maintain, and operate according to manufacturer's specifications, a device for the measurement of liquid stream flow rates on the packed tower scrubber associated with storage tank (Emission Unit 2). The device shall be set to alarm when the flow is below the manufacturer's recommended minimum flow rate while the scrubber is operational.

8. **Alternate Operating Scenarios:** None

REGULATIONS, AND OPERATING CONDITIONS (Continued)

10 (I1) Carbon Adsorber
Plant 2 – Impregnated Polystyrene Beads Production

Description: Primary Product: Expanded Polystyrene
Control Equipment for VOC: Carbon Adsorber, Control Efficiency: 95%

1. Three (3) Reactors (R101, R102, R103) – 10,000 gallon pressure drums
   Construction Dates: January 30, 1987, April 7, 1989, October 4, 1989
2. Two (2) Batchout tanks (601 and 701) , 20,000 gallons
   Construction Date: January 30, 1987, October 4, 1989
3. Two(2) Pentane Storage Tanks (Tanks 107 and 108) - 30,000 gallons
   Construction Date: January 30, 1987
4. Pentane Weigh Tank (D103)
5. Pentane Reclaim Storage (Tank 401), 8,000 gallons
   Construction Date: 12/20/89
6. Drying Tank, TK 7550
   Construction Date: March 21, 2000

11 (--) **Plant 2 – Impregnated Polystyrene Beads Production**

1. Three (3) Carter Day Dryers
   Construction Date: (2) on January 30, 1987, October 4, 1989
2. Three (3) Secondary Dryers
   Construction Date: January 30, 1987, (2) on October 4, 1989
3. Three (3) Screeners
   Construction Date: January 30, 1987, April 7, 1989, October 4, 1989
4. Packaging Area #1
   Construction Date: January 30, 1987
5. Packaging Area #2
   Construction Date: October 4, 1989

APPLICABLE REGULATIONS:

401 KAR 60:005, *Standards of Performance for New Stationary Sources* **(40 CFR 60, Subpart Kb**, *Standards of Performance for Volatile Organic Liquid Storage Vessels)* is applicable to Emission Unit 10, Emission Point 3 above.

40 CFR 60, Subpart DDD is applicable to the VOC emissions from equipment leaks from EPS manufacturing process [40 CFR 60.560(a)(4)].

REGULATIONS NOT APPLICABLE:

Dart Polymers has elected to rout the emissions from affected facilities listed in Section D of the permit to control equipment (Carbon Adsorber) to avoid the requirements of **401 KAR 51:017**, *Prevention of Significant Deterioration of Air Quality.*

40 CFR 63.1310, Subpart JJJ - *Group IV Polymers and Resins* applies to the Thermoplastic Product Process Unit (Production of EPS, Expanded Polystyrene). However, according to 40 CFR 63.1310(c)(5), Vessels and equipment storing and/or handling material that contain no organic HAP and/or organic HAP as impurities only are exempted from affected source. EPS contains styrene only

10, 11 Carbon Adsorber & Plant 2 – Impregnated Polystyrene Beads Production (Continued)

as an impurity, according to 40 CFR 63.101, as styrene is present in the raw material polystyrene beads.
40 CFR 60, Subpart DDD is not applicable to the process emissions as the EPS process is not a continuous process [40 CFR 60.560(a)(2)]. The EPS manufacturing is a batch process.
401 KAR 60:005, *New Source Performance Standards (40 CFR 60.110b, Subpart Kb, Standards of performance for Volatile Organic Liquid Storage Vessels)* is not applicable to the Pentane Reclaim Storage Tank, Emission Unit 10, Emission Point 5.

1. **Operating Limitations:** None

2. **Emission Limitations:**
   a. Emission Unit 10, Emission Point 3 (Two Pentane Storage Tanks):
   According to 40 CFR 60.112b(a)(3), a closed vent system with a control device shall be installed meeting the requirements as specified in 40 CFR 60.112b(a)(3)(i) and (ii).
   40 CFR 60.112b(a)(3)(i): The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in part 60, subpart VV, 60.485(b).
   40 CFR 60.112b(a)(3)(ii): The Control Device (Carbon Adsorber) shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater.
   b. To avoid 401 KAR 51:017, *Prevention of Significant Deterioration*, VOC emissions from Emission Unit 10, Emission points 2,3,5,6 shall be routed to the Carbon Adsorber through a closed vent system. See Section D**, Source Emission Limitations and Testing Requirements** for group requirements and emission units effected.
   c. Emission Unit 10, Emission Points 1 through 6 [40 CFR 60, Subpart VV requirements as referred by 40 CFR 60.560(a)(4)]: The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 60, Subpart DDD or 40 CFR 60 Subpart VV, the permittee shall maintain records of the reason(s) why the equipment is exempt.

      i. Standards: Pumps in light liquid service [40 CFR 60.482-2]:

40 CFR 60.482-1	Implementation and compliance provisions
40 CFR 60.482-2(a)	Monitoring requirements, frequency of monitoring
40 CFR 60.482-2(b)	leak detection levels
40 CFR 60.482-2(c)	Repair time frames
40 CFR 60.482-2 (d)-(f)	Exemptions for specific types of pumps

      ii. Standards: Pressure relief devices in gas/vapor service [40 CFR 60.482-4]:

40 CFR 60.482-4 (a)	Operational requirements
40 CFR 60.482-4 (b)	Pressure release procedures
40 CFR 60.482-4 (c)	Exemptions for specific types of pressure relief devices

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

10, 11 Carbon Adsorber & Plant 2 – Impregnated Polystyrene Beads Production (Continued)

iii. Standards: Open-ended valves or lines [40 CFR 60.482-6]:

40 CFR 60.482-6 (a)-(c)	Operational requirements

iv. Standards: Valves in gas/vapor service and in light liquid service [40 CFR 60.482-7]:

40 CFR 60.482-7 (a)	Operational requirements
40 CFR 60.482-7 (b)-(c)	Monitoring requirements and intervals
40 CFR 60.482-7 (d)	Leak repair time frames
40 CFR 60.482-7 (e)	First attempt repair procedures
40 CFR 60.482-7 (f)-(h)	Exemptions for no detectable emissions, unsafe-to-monitor and difficult-to-monitor valves.

v. Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and flanges and other connectors [40 CFR 60.482-8]:

40 CFR 60.482-8 (a)	Operational requirements
40 CFR 60.482-8 (b)-(c)	Leak detection and repair time frames
40 CFR 60.482-8 (d)	First attempt repair procedures

vi. Standards: Delay of repair [40 CFR 60.482-9]:

40 CFR 60.482-9	Allowances for delay of repair

vii. Standards: Closed vent systems and Control devices [40 CFR 60.482-10]:

40 CFR 60.482-10 (a)	Applicability Requirements
40 CFR 60.482-10 (b)	Vapor Recovery System efficiency
40 CFR 60.482-10 (e)	Monitoring of control devices
40 CFR 60.482-10 (f)	Inspection of Closed vent system
40 CFR 60.482-10 (g)	Leak detection and Repair
40 CFR 60.482-10 (h)	Delay of Repair
40 CFR 60.482-10 (i) – (k)	Exemptions for certain types of vapor collection systems or closed vent systems
40 CFR 60.482-10 (l)	Record Keeping requirements
40 CFR 60.482-10 (m)	Requirement to operate the control device

Compliance Demonstration:

a. A process flow diagram shall be kept available at the plant site which shows that Emission Unit 10, Emission Points 1 through 6 are routed via a closed vent system to the carbon adsorber. Anytime the emissions are routed away from the adsorber shall be recorded and the reason for the deviation.
b. See 4. Specific Monitoring Requirements and 7. Specific Control Equipment Operating Conditions below.
c. For compliance with visual inspections for the two pentane tanks, Method 21 shall be used to determine the presence of leaking sources. Also see 40 CFR 60.485(b).
d. A copy of the leak detection and repair (LDAR) program meeting the criteria listed above in (c) shall be kept available at a readily accessible location for inspection.

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

10, 11 Carbon Adsorber & Plant 2 – Impregnated Polystyrene Beads Production (Continued)

3. Testing Requirements:

a. For the leaks from the closed vent system, background concentration shall be established. The emissions shall be measured using FID or similar instrument. Dart has proposed to show during the testing in b. below that all the emissions are captured using the closed vent system. This shall be done according to guidance in 40 CFR 60.113b(a)(3)(i).

b. Testing shall be done on the carbon adsorber and organic monitoring device to show compliance with 95% emission reduction at the carbon adsorber [40 CFR 60.112b(a)(3)(ii)]. A testing protocol shall be submitted within three months of permit issuance and be approved by the Division. If the control device or the closed vent capture system receives vapors, gases, or liquids other than from the two pentane storage tanks they shall be included in the control efficiency demonstration [40 CFR 60.112b(a)(3)(ii)]. The test results shall be submitted to the Division within 6 months of the initial issuance of the permit. The Division reserves the right to require additional testing.

c. The permittee shall comply with the following test methods and calibration procedures requirements [Subpart VV referred by Subpart DDD, 40 CFR 60.485]:

i. 40 CFR 60.485(a) – (c) Reference Methods and Compliance with standards
ii. 40 CFR 60.485(d) Exemption from testing, Procedures
iii. 40 CFR 60.485(e) Equipment in light liquid service, applicability

4. Specific Monitoring Requirements:

a. All the emissions under control of the closed vent system shall be drawn into the system by a fan. An alarm shall be activated on the system control panel causing the recovery system to shut down upon the failure of the fan. A log shall be kept of such occurrences.

b. To show compliance with 95% control efficiency for carbon adsorber, the permittee shall:

i. Monitor the solvent laden air (SLA) temperature entering the carbon bed. According to the operating plan for pentane recovery system submitted pursuant to 40 CFR 60.113b(c)(1)(i) and (ii), an alarm is activated when the SLA stream temperature exceeds 90 deg F. A log shall be kept of such occurrences.

ii. Monitor Carbon Bed desorption temperature. According to the operating plan for pentane recovery system submitted pursuant to 40 CFR 60.113b(c)(1)(i) and (ii), an alarm is activated if the bed temperature does not reach at least 200 deg F in first 2000 seconds of the regeneration phase. A log shall be kept of such occurrences.

c. See 4. Testing Requirements above.

5. Specific Recordkeeping Requirements:

a. See 4. Specific Monitoring Requirements above and Section D, Source Emission Limitations and Testing Requirements.

b. A copy of the operating plan for pentane recovery system submitted pursuant to 40 CFR 60.113b(c)(1)(i) and (ii) shall be kept available.

c. Subpart VV Requirements as referred by Subpart DDD:

i. All records required by 40 CFR 60.486 shall be maintained in a manner that can be readily accessed at the plant site.

ii. When a leak is identified the procedures in 40 CFR 60.486(b) shall be followed and the information shall be recorded in a log as described in 40 CFR 60.486(c).

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

10, 11 Carbon Adsorber & Plant 2 – Impregnated Polystyrene Beads Production (Continued)

iii. The information on design requirements of closed vent system and control device shall

be kept as detailed in 40 CFR 60.486(d).

iv. 40 CFR 60.486(e) Information of all equipment subject to 40 CFR 60.482-1 to 482-10

v. 40 CFR 60.486(f) Information of all valves subject to 40 CFR 60.482-7(g) and (h)

vi. 40 CFR 60.486(g) Information of all Valves complying with 40 CFR 60.483-2

vii. 40 CFR 60.486(h) Design Criteria and Changes to Design Criteria

viii 40 CFR 60.486(i) Exemptions

ix. Information and data used to demonstrate that a piece of equipment is not in VOC service shall be recorded in a log that is kept in a readily accessible location.

6. Specific Reporting Requirements:

a. The periods when the control equipment is malfunctioned.

b. Subpart VV Requirements as referred by Subpart DDD [40 CFR 60.487]:
The initial Semi-Annual report as required by Section F of this permit shall include:

i. The list of all the equipment (Pipe line components etc..) subject to Subpart VV [40 CFR 60.487(b)].

ii. The information on leaks detected, repaired, and not repaired [40 CFR 60.487(c)].

7. Specific Control Equipment Operating Conditions:

a. The carbon adsorber shall be maintained and replaced or regenerated according to the manufacturer's guidelines. Any problems associated with the operation or regeneration of the carbon bed shall be recorded in a log.

b. The Hydrochloric Acid shall always be added to the Batchout Tanks (emission unit 10, Emission point 2 above) via submerged fill pipe only.

8. Alternate Operating Scenarios: None

SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (Continued)

Plant 2 – Impregnated Polystyrene Beads Production

12 (--) Two (2) Boilers

Description: Maximum Rated capacity: 14.6 mmBTU/hr
Construction Date: January 30, 1987
Primary fuel: Natural Gas

Plant 3 – Polystyrene Beads (Suspension Plant)

13 (--) Two (2) Boilers

Description: Maximum Rated capacity: 29.29 mmBTU/hr
Construction Date: April 3, 1989
Primary fuel: Natural Gas

14 (--) One (1) Boiler

Description: Maximum Rated capacity: 25.0 mmBTU/hr
Construction Date: May 30, 1990
Primary fuel: Natural Gas

15 (--) Three (3) Emergency Generators

Description: Maximum Rated capacity: 1592 hP
Primary fuel: Diesel

APPLICABLE REGULATIONS:

401 KAR 59:015, *New indirect fired heat exchangers*, applies to the particulate matter and sulfur dioxide emissions from the combustion of natural gas in five boilers (Emission Unit 12, 13 and 14).

401 KAR 60:005, *New Source Performance Standards (40 CFR 60.40c to 60.48c, Subpart Dc, Standards of performance for small industrial-commercial-institutional steam generating units)* is applicable to the boiler, Emission Unit 14. (Note: The regulation does not have any applicable standards for natural gas fired boilers)

REGULATIONS NOT APPLICABLE:

401 KAR 60:005, *New Source Performance Standards (40 CFR 60.40c to 60.48c, Subpart Dc, Standards of performance for small industrial-commercial-institutional steam generating units)* is not applicable to the four boilers, Emission Unit 12 and 13.

1. **Operating Limitations:** None

2. **Emission Limitations:**
   Emission Unit 12, 13 and 14:
   a. Pursuant to 401 KAR 59:015, Section 4(1)(c), emissions of particulate matter from the combustion of natural gas shall not exceed 0.316 lb/mmBTU.
   b. Pursuant to 401 KAR 59:015, Section 4(2), the opacity of visible emissions from the combustion of either natural gas or fuel oil shall not exceed 20%.
   c. Pursuant to 401 KAR 59:015, Section 5(1)(c)1, emissions of sulfur dioxide from the combustion of either natural gas or fuel oil shall not exceed 1.11 lb/mmBTU.

REGULATIONS, AND OPERATING CONDITIONS (Continued)

12, 13, 14, 15 Boilers and Generators (Continued)

Compliance Demonstration:

Particulate Matter and Sulfur Dioxide Emissions: (The "Total" used below is the total from the five boilers above and the fuel consumption rate is in millions of cubic feet)

Emission Rate in lb/mmBTU = [(Total Monthly gas or fuel oil consumption rate x Emission factor listed in Kentucky Emissions Inventory) / (Total Hours of operation per month x Total Hourly Rated Capacity)]

3. **Testing Requirements:**
   Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in Regulation 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**
   Emission Units 12, 13, and 14:
   The permittee shall monitor and maintain records of the following information:
   a. The total monthly fuel usage rate (cubic feet/month or gallons per month)
   b. The total monthly hours of operation (hours operated per month) of the boilers.
   c. The sulfur content of each type of fuel burned. The sulfur content maybe determined by fuel sampling and analysis or by fuel supplier certification.

5. **Specific Record keeping Requirements:**
   See Specific Monitoring Requirements above.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

8. **Alternate Operating Scenarios:** None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Description	Generally Applicable Regulation
1. Styrene Bulk Truck Loading	None
2. 17,000 gal Mineral Oil Storage Tank	None
3. 12,000 gal Polybutene Tank	None
4. 2-300 gal Line 3 Catalyst Tanks	None
5. 6000 gal. Ethylbenzene Tank	None
6. 5500 gal Ethylbenzene Line 2 Recycle Tank	None
7. 5600 gal Ethylbenzene Lines 3 Recycle Tank	None
8. 10,250 gal. Hazardous Waste Tank	None
9. Mass Plant Pellet Storage Silos & Packaging	None
10. Maintenance Area Space Heaters	None
11. Safety Kleen Cold Solvent Degreaser Units	None (Exempt from 401 KAR 59:185)
12. Ethylbenzene Degreaser Unit	None (Exempt from 401 KAR 59:185)
13. 2-500 gal Fuel Oil Tanks	None
14. 500 gal Gasoline Tank	None
15. Mass Plant Direct Fired Boiler #1,5 MMBtu/hr	None
16. Mass Plant Direct Fired Boiler #2,5 MMBtu/hr	None
17. Mass Plant Direct Fired Boiler #3,5 MMBtu/hr	None
18. Suspension Plant Effluent Tank	None
19. Suspension Plant Vacuum System	None
20. Suspension Plant Centrifuges, Dryers, Screeners and Bins	401 KAR 59:010
21. Bead Truck Loading Station	None
22. Caustic Solution Storage Tanks	None
23. HCl Storage Tank (Deionized Water)	None
24. Suspension Plant Bead Storage Silos	None
25. Impregnation Plant Premix Tank	None
26. Impregnation Pack Area #1 including Blender	401 KAR 59:010
27. Impregnation Pack Area #2 including Blender	401 KAR 59:010
28. Impregnation Plant Cyclones	401 KAR 59:010
29. Impregnation Plant Storage Silos	401 KAR 59:010
30. Impregnation Plant Caustic Storage Tank	None
31. Extruder – Pelletizers (2)	401 KAR 59:010
32. Impregnation Plant Lab/Test Facilities	None
33. Waste Water Treatment Facility	None
34. 2- 287 hP Fire Water Pumps	None
35. Impregnation Plant HCl tanks	None
36. (2) 300-gal Line 1 Initiator Tanks (D-0130, D-0140)	None

SECTION C - INSIGNIFICANT ACTIVITIES

37. Styrene Monomer Railcar Unloading Facility None
38. Silicone Storage Bulk Container None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. Ethylbenzene, Styrene, and VOC emissions, as measured by methods referenced in 401 KAR 50:015, Section 1, shall not exceed the respective limitations specified herein.

3. The following requirements apply to all Processes in Plant 1 – Mass Plant (Polystyrene Pellets Production) and Plant 3 – Suspension Plant (Polystyrene Beads Production).

Recordkeeping Requirements:

a. 40 CFR 63, Subpart A requirements:
Startup, shutdown, and malfunction plan: The permittee shall develop and implement a written startup, shutdown, and malfunction plan as specified in 40 CFR 63.6(e)(3) of subpart A [40 CFR 63.1335(b)(1)]. The records shall be kept as specified in 40 CFR 63.1335(b)(1)(i)(A) through 63. 1335 (b)(1)(i)(D).

b. 40 CFR 63, Subpart JJJ requirements [40 CFR 63.1335(d), Recordkeeping and documentation]: The permittee shall keep records as specified in 40 CFR 63.1335(d)(1) through (d)(10).

Reporting Requirements:

a. 40 CFR 63, Subpart A requirements:
i. *Startup, shutdown, and malfunction plan*: The permittee shall submit the semiannual report [63.1335(b)(1)(ii)] on the same schedule, as the Periodic Reports required by 63.1335(e)(6). The report shall include the information specified in paragraphs 40 CFR 63.1335(b)(1)(i)(A) through 63.1335(b)(1)(i)(C) and shall contain the name, title, and signature of the responsible official who is certifying its accuracy.
ii. *Application for approval of construction or reconstruction:* 40 CFR 63.1335(b)(2)

b. 40 CFR 63, Subpart JJJ requirements [40 CFR 63.1335(e), Reporting and Notification]
i. *Notification of Compliance Status* [63.1335(e)(5)]*:* The permittee shall submit the Notification of Compliance Status within 150 operating days after the compliance dates specified in 40 CFR 63.1311 [June 19, 2001]. The notification shall contain the information listed in paragraphs 40 CFR 63.1335(e)(5)(i) through (e)(5)(viii).
ii. *Periodic Reports* [40 CFR 63.1335(e)(6)]: The permittee shall submit Periodic Reports as specified in paragraphs 40 CFR 63.1335(e)(6)(i) through (e)(6)(xi).
iii. *40 CFR 63.1335(e)(6)(i)*: The periodic reports shall contain the information as specified in paragraph 40 CFR 63.1335(e)(6)(ii) or 40 CFR 63.1335(e)(6)(iii) through (e)(6)(ix). The report shall be submitted semiannually no later than 60 operating days after the end of each 180 day period. The first report shall be submitted no later than 240 days after the date the

Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Subsequent reports shall cover each preceding 6-month period.

4. The following requirements apply to the listed Emission Units in Plant 2 – Impregnated Polystyrene Beads Production

10	**(2)**	Two (2) Batchout tanks, 20,000 gallons Construction Date: January 30, 1987, October 4, 1989
10	**(3)**	Two(2) Pentane Storage Tanks, 30,000 gal Construction Date: January 30, 1987
10	**(5)**	Pentane Reclaim Storage
10	**(6)**	Drying Tank Construction Date: March 21, 2000

Description:
The above Emission Units are effected (increase in VOC emissions) by the addition of a drying tank and process change to remove additional n-pentane from the finished product by having longer cycle time (5 hours of batch time instead of 2.5 hrs) for circulating the slurry in the batchout tanks. These changes will be referred as "MODIFICATION" in the following sections. Also effected by the MODIFICATION are Pentane Reclaim Storage, Premix Tank, Two (2) Pentane Storage tanks and drying Tank.

Control Equipment for VOC emissions from Emission Units listed above: Carbon Adsorber
Control Efficiency: 95%

APPLICABLE REGULATIONS:
See Section B, Plant 2 – Impregnated Polystyrene Beads Production
Note: **401 KAR 51:017**, *Prevention of Significant Deterioration of Air Quality* does not apply to the above Emission Units as the VOC emissions from the modification are limited to 10.51 TPY.

Operating Limitations:
The above listed Emission Units shall always be vented to the carbon adsorber to control the VOC emissions.

Compliance Demonstration:
a. The periods when the above listed Emission Units are not vented to the carbon adsorber shall be recorded. If the Emission Units listed above are not vented to carbon adsorber, the permittee shall submit material balance calculations to show that the emissions are below 10.51 TPY. See the Emission Limitations below.
b. A "process flow diagram" shall always be kept at the plant site showing how the Emission Units are vented to the control device.

Emission Limitations:
The total VOC emissions from the MODIFICATION shall not exceed 10.51 TPY during any

twelve consecutive month period to stay below 40 TPY PSD significant level for VOC emissions.

Compliance Demonstration:

a. The emissions from the MODIFICATION are assumed to be in compliance as long as the VOC emissions are always vented to the Carbon Adsorber. If the Emission Units listed above are not vented to carbon adsorber, the permittee shall submit material balance calculations and/or AP-42 guidance to show that the emissions are below 10.51 TPY. The Division reserves the right for additional testing in case of the material balance does not satisfactorily show compliance with the limits. See the Testing, Recordkeeping and Reporting requirements below.
b. See the Specific Control Equipment Operating Conditions below
c. Initial emission factors as submitted in the application shall be used to calculate VOC emissions until source specific emission factors are approved for the above Emission Units. See Testing Requirements below for emission factor determination. After the source specific emission factors are approved they will be in the Kentucky Emissions inventory system and shall be used to calculate VOC emissions. Monthly emissions shall be calculated and be kept available at plant, and shall be used to calculate the annual emission rate.

   Yearly Emission Rate =12 month rolling total of monthly emissions

Testing Requirements:

Emission factors from the above Emission Units shall be established by testing, Engineering Estimates or AP-42 guidance to calculate the VOC. The Emission factors calculations (Engineering Estimates or AP-42 emission factors) shall be submitted within 3 months of the initial issuance of the permit. For any testing performed to establish emission factors, a test protocol shall be submitted and be approved by the Division. The Division reserves the right to require additional testing.

Specific Monitoring Requirements:

a. See **PLANT 2 – IMPREGNATED POLYSTYRENE BEADS PRODUCTION (Emission Unit 11)** in **Section B** for requirements on carbon adsorber (Page 21, Condition 4. specific Monitoring Requirements).
b. In case of emissions not being vented to carbon adsorber, all the information necessary for emissions calculations from above emissions units shall be monitored on a monthly basis. The permittee shall submit an alternative compliance plan in advance for Divisions approval.

Specific Recordkeeping Requirements:

a. See the Specific Monitoring Requirements above.
b. Monthly throughput of the Polystyrene beads and Pentane shall be recorded.

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (Continued)

Specific Reporting Requirements:

a. See **PLANT 2–IMPREGNATED POLYSTYRENE BEADS PRODUCTION** (Emission Unit 11) in Section B for requirements on carbon adsorber (Page 22, Condition 6, Specific Reporting Requirements).
b. See the record keeping requirements above.

Specific Control Equipment Operating Conditions:

See **PLANT 2 – IMPREGNATED POLYSTYRENE BEADS PRODUCTION (Emission Unit 11)** in **Section B** for requirements on carbon adsorber (Page 22, Condition 7, Specific Control Equipment Operating Conditions).

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

   Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at

REQUIREMENTS (CONTINUED)

least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards notification shall be made as promptly as possible by telephone (or other electronic media) and shall cause written notice upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Owensboro Regional Office
3032 Alvey Park Drive W.
Owensboro, KY 42303-7304

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

11. Pursuant to Section VII (3) of the policy manual of the Division for Air Quality as referenced in 401 KAR 50:016, Section 1(1), results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
   a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
   b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
   c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

   Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].

11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Natural Resources and Environmental Protection or any other federal, state, or local agency.

13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].

15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

SECTION G - GENERAL PROVISIONS (CONTINUED)

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
    (a) Applicable requirements that are included and specifically identified in the permit and
    (b) Non-applicable requirements expressly identified in this permit.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:02+0 Section 8(2)].

(c) Permit Revisions

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

(d) Construction, Start-Up, and Initial Compliance Demonstration Requirements
Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction and modification of the equipment described herein, emission points 01 and 03, in accordance with the terms and conditions of this permit.

1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

SECTION G - GENERAL PROVISIONS (CONTINUED)

2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
   a. The date when construction commenced.
   b. The date of start-up of the affected facilities listed in this permit.
   c. The date when the maximum production rate specified in the permit application was achieved.

3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.

6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

7. Pursuant to Section VII 2.(1) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), at least one month prior to the date of the required performance test, the permittee shall complete and return a Compliance Test Protocol (Form DEP 6027) to the Division's Frankfort Central Office. Pursuant to 401 KAR 50:045, Section 5, the Division shall be notified of the actual test date at least ten (10) days prior to the test.

SECTION G - GENERAL PROVISIONS (CONTINUED)

8. Pursuant to Section VII 1.(2 and 3) of the policy manual of the Division for Air Quality as referenced by 401 KAR 50:016, Section 1.(1), if a demonstration of compliance, through

performance testing was made at a production rate less than the maximum specified in the application form, then the permittee is only authorized to operate at a rate that is not greater than 110% of the rate demonstrated during performance testing. If and when the facility is capable of operation at the rate specified in the application, compliance must be demonstrated at the new production rate if required by the Division.

(e) Acid Rain Program Requirements

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   a. An emergency occurred and the permittee can identify the cause of the emergency;
   b. The permitted facility was at the time being properly operated;
   c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
   d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
   e. This requirement does not relieve the source of other local, state or federal notification requirements.

2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

SECTION G - GENERAL PROVISIONS (CONTINUED)

RMP Reporting Center
P.O. Box 3346
Merrifield, VA, 22116-3346

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
   a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
   b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
   c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
   d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
   e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
   f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H - ALTERNATE OPERATING SCENARIOS

The alternate operating scenarios set forth below have been approved by the Division based on information supplied with the application and during the application review process. The terms and conditions of each alternate operating scenario have been developed to ensure compliance with the applicable regulations. The permittee, when making a change from one operating scenario to another, shall record contemporaneously in a log at the permitted facility a record of the scenario under which the facility is operating. The permit shield, as provided in Section G shall extend to each alternate operating scenario set forth in this Section. All conditions not specified under an alternate operating scenario shall remain unchanged from their permit values or requirements.

Alternate OPERATING SCENARIO 1

The following affected facilities will vent through their dedicated vents (Not through the Anti-Oxidant tank as listed in Section B). This will be done on regular basis or when bringing process systems down.

01 (--) Batch Process Vents

Stack (M-10) Line 1 :

1. Pre-batch Reactor R-101 (Group 2 process vent)
2. Pre-poly Reactor R-102 (Group 2 process vent)
3. U-tube Reactor R-1310 (Group 2 process vent)

Stack (M-11) Line 2:

4. Pre-batch Reactor R-201 (Group 2 process vent)
5. Pre-poly Reactor R-202 (Group 2 process vent)
6. U-tube Reactor R-2310 (Group 2 process vent)

Stack (M-6) Anti-oxidant Tank:

7. Rubber Dissolver #1 D-410 (Group 2 process vent)
8. Rubber Dissolver #2 D-420 (Group 2 process vent)
9. Rubber Dissolver #3 D-430 (Group 2 process vent)
10. Antioxidant Tank TK-0710 (Group 2 process vent)

APPLICABLE REGULATIONS:
All the requirements including the applicability of 40 CFR 63, Subpart JJJ and the emission limits will continue to apply as described on Pages 2 through 5. **See Pages 2 through 5 of Section B for applicable requirements.**

Alternate OPERATING SCENARIO 2

In the event that the Line 1 Prepoly Reactor (R-1310) is operated without reflux (e.g., no material flows through the reflux condenser C-1310), R-1310 will be isolated from the reflux condenser and operated under pressure rather than vacuum, which will result in less material flow to the vacuum vent (M-7).

Alternate OPERATING SCENARIO 2 (Continued)

03 (--) Group 2 Continuous Process Vents

Stack (M7) Vacuum Pump Vent:

2. Line 1 Prepoly Reactor (R-1310) (Continuous Process Vent)
3. Line 1 Prepoly Condenser (C-1310) (Continuous Process Vent)

APPLICABLE REGULATIONS:

All the requirements including the applicability of 40 CFR 63, Subpart JJJ and the emission limits will continue to apply as described on Pages 6 through 9. **See Pages 6 through 9 of Section B for applicable requirements.**

SECTION I - COMPLIANCE SCHEDULE

Not applicable.